



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION:	GE90-77B	BYPASS RATIO:	8.5
UNIQUE ID NUMBER:	9GE125	PRESSURE RATIO (π_{00}):	35.8
COMBUSTOR:	PEC		
ENGINE TYPE:	TF	RATED THRUST (F_{00}) (kN):	366.8

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	5.5	47.9	61.3	2.0
AS % OF ORIGINAL LIMIT	28.0	40.6	54.9	11.8
AS % OF CAEP/2 LIMIT (NO _x)			68.7	
AS % OF CAEP/4 LIMIT (NO _x)			78.0	
AS % OF CAEP/6 LIMIT (NO _x)			86.9	
AS % OF CAEP/8 LIMIT (NO _x)			99.3	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	2.830	0.03	0.31	40.83	1.0
CLIMB OUT	85	2.2	2.309	0.03	0.32	32.78	0.8
APPROACH	30	4.0	0.745	0.07	2.71	13.87	1.4
IDLE	7	26.0	0.260	3.16	33.81	5.12	1.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1007	1307	14314	19394	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				3.6	39.0	52.9	1.5
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.3	1.1	0.7	0.8
RANGE (D _p /F ₀₀ in g/kN, or SN)				3.36-3.91	38.29-40.24	52.14-53.57	0.86-2.36

ACCESSORY LOADS

POWER EXTRACTION	0	(kW)	AT	All	POWER SETTINGS
STAGE BLEED	0	(% CORE FLOW)	AT	All	POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-98.7
TEMPERATURE (K)	277.2-281.3
ABS HUMIDITY (kg/kg)	0.0015-0.0043

FUEL

SPEC	Jet A-1
H/C	
AROM (%)	15-16

MANUFACTURER: General Electric Company
 TEST ORGANIZATION: General Electric Peebles Test Operation
 TEST LOCATION: Site 6A
 TEST DATES: 30/11/2007-08/12/2007

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

REMARKS

- GE Aviation Report R2007AE851
- Engine serial number 900-505/1
- Turbomachinery incorporating 3D aero
- Performance Enhanced Combustor (PEC)
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)